Human-Computer Interaction and Information Management

information of all kinds in databases, distributed

- Real-time assessment of warfighter status (phase one)
- Real-time maximization of warfighter potential (phase two)
- Autonomous adaptation to support warfighter performance under stress (phase three)
- Operational demonstration and test (phase four)

Warfighters are constrained in the amount of information they can manage. Adaptive strategies will mitigate specific information processing roadblocks impeding increased performance and information flow. Strategies include:

- Intelligent interruption to imprtime asind information flow. Strafighters are constrainethree)

NASA HCI&IM investments include fundamental research in:

- Human information processing and performance
- Multimodal interaction
- Human-robotic systems
- Automation and autonomy
- Software engineering tools
- Knowledge management and distributed collaboration
- Computational models of human and organizational behavior

In the aviation domain, for example, HCI&IM investments include:

- Human-computer interaction for highlyon anmated vehicle cockpits (aviation/shuttle flight control systems; system health management systems; International Space Station [ISS] interfaces)
- Human-computer interaction for air traffic management applications (air traffic control; cockpit display of traffic information; distributed air-ground collaboration)
- Proactive management of system risk (air traffic management; onboard flight-recorded data; human and organizational risk)

Information Technology Laboratory (ITL)

The mission of ITL's Information Access Division (IAD) is to accelerate the development of technologies that allow intuitive, efficient access, manipulation, and exchange of complex information by facilitating the creation of measurement methods and standards. IAD achieves the objectives by contributing to R&g in these technologies; enabling faster transition into the commercial marketplace; and enabling faster transition into sponsors' applications (performance metrics, evaluation methods, test suites, and test data; prototypes and testbeds; workshops; and standards and guidelines). IAD works in collaboration with industry,